

THERMOPLASTIC RESIN FILM AND PROCESS FOR PRODUCING THE SAME**Publication number:** WO03055937 (A1)**Publication date:** 2003-07-10**Inventor(s):** HAYAKAWA SATOSHI [JP]; TABOTA NORIMI [JP]; NAGANO HIROSHI [JP]**Applicant(s):** TOYO BOSEKI [JP]; HAYAKAWA SATOSHI [JP]; TABOTA NORIMI [JP]; NAGANO HIROSHI [JP]**Classification:****- international:** B29C59/12; B29C59/14; B29C61/00; B29D7/01; C08J5/18; B41M5/00; B29C59/00; B29C61/00; B29D7/00; C08J5/18; B41M5/00; (IPC1-7): C08J5/18; B29C61/02; C08J7/00; B29K25/00; B29K67/00; B29L7/00; C08L25/04; C08L67/00; C08L101/00**- European:** B29C59/12; B29C59/14; B29C61/00B; B29D7/01; C08J5/18; C08J5/18; C08J5/18**Application number:** WO2002JP13577 20021226**Priority number(s):** JP20010397774 20011227; JP20020104210 20020405; JP20020143484 20020517; JP20020177565 20020618**Also published as:**

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- EP1460101 (B1)
- US2005095379 (A1)
- US7166342 (B2)

- Cited documents:**
- JP2001096616 (A)
 - JP2001058377 (A)
 - JP2001295051 (A)
 - WO9404601 (A1)
 - JP60240434 (A)

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A heat-shrinkable resin film which has a heat shrinkage in the maximum shrinkage direction of 20% or higher when a 10 cm by 10 cm square sample cut out thereof is immersed in 85 DEG C water for 10 seconds, pulled out, subsequently immersed in 25 DEG C water for 10 seconds, and then pulled out, characterized in that the content of nitrogen atoms in a film surface is 0.1 to 3.0% and the film surface has a wet tension of 36 mN/m or higher; ; and a film roll obtained by winding up the heat-shrinkable resin film, characterized in that when the rolled film is sampled at a first sampling part located up to 2 m apart from the end of the rolled film and at other sampling parts located after the first sampling part at intervals of about 100 m and the average nitrogen content of each sample is calculated, then the nitrogen content of each sample is within the +0.8% range based on that average nitrogen content.

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